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date

23 May 2005

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By Fax
0041 22 7335428

Dear Sirs

**RE: Patent Application No. PCT/GB2004/004255 in International (PCT)
in the name of University of Southampton**

Please find enclosed an amended set of Claims 1-3, which are being filed under Article 19 PCT. Amended Claims 1-3 replace Claims 1-4 currently on file.

Amendments Under Article 19 PCT:

Claims 1 and 2 have been replaced by amended claims bearing the same numbers, Claim 3 is unchanged, and Claim 4 has been cancelled.

Informal Comments:

We submit that the amended Claims 1-3 being filed herewith under Article 19 PCT are both novel and inventive over all of the cited documents.

Furthermore, we submit that Claim 2, as amended, is clear and meets the requirements of Article 6 PCT. Article 6 PCT requires that the Claims be both clear and concise. We submit that any attempt to define the scope of Claim 2 without reference to Figure 2 would result in a claim that would be far less clear and far less concise than the current Claim 2. Accordingly, we submit that it is absolutely necessary to refer to Figure 2 in Claim 2, in order to meet the requirements of Article 6 PCT.

With regard to the documents cited in the Written Opinion of the ISA, we submit that none of the documents discloses a process according to the present Claims 1-3.

The present invention provides a combinatorial chemistry process for the simultaneous deposition of two or more materials in uniformly varying amounts, the amounts varying

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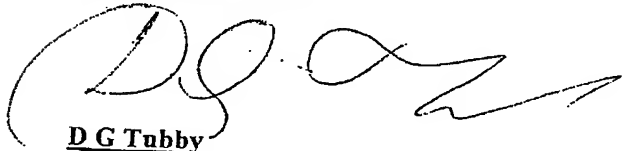
according to a pre-arranged pattern according to location on a substrate. This is achieved by the process according to Claims 1-3.

In the process of the current invention, each of two or more vapour sources is associated with its own associated mask, and each mask is positioned carefully as defined in the Claims.

As explained in the description of the present application on Page 2 (lines 8-9), it is the 'careful positioning' of the mask(s) that results in the special benefits of the present invention. In particular, the careful positioning of the mask(s) according to Claims 1-3 allows total control over the growth of the wedge of deposited material(s) on the substrate, each gradient being fully controllable between a uniform film and a film with a sharp gradient. In this way, the present process allows considerably more flexibility and subtlety in mixing materials, which is an important advantage in combinatorial chemistry.

None of the cited documents disclose or suggest a process according to the present invention. Thus, we submit that the present claims are both novel and inventive over the cited documents.

Yours faithfully,
MARKS & CLERK

A handwritten signature in black ink, appearing to read 'D G Tubby', with a large, stylized flourish extending to the right.

D G Tubby

Encl. Amended Claims

CLAIMS:

1. A combinatorial chemistry process, in which a material is vaporised from each of at least two sources and deposited on a single substrate, the path of the vaporised material from each source to the substrate being partially interrupted by an associated mask, the positioning of the mask in a plane parallel to the plane defined by the substrate being such that the material is deposited on the substrate in a thickness which increases substantially continuously in a direction along the substrate, and where a further plane is defined by the centres of the source associated with that mask and the substrate and intersecting an edge of the mask, the mask being so positioned that its intersection with the further plane lies within the boundaries defined by the intersection of the surface of the source with the further plane and the lines in the further plane joining each edge of the source with the opposite edge of the substrate, each mask being closer to its associated source than to the substrate, and each mask being moveable but not being moved in the course of the deposition process.

2. A combinatorial chemistry process, in which a material is vaporised from each of at least two sources and deposited on a single substrate, the path of the vaporised material from the source to the substrate being partially interrupted by an associated mask, the positioning of the mask in a plane parallel to the plane defined by the substrate being such that the material is deposited on the substrate in a thickness which increases substantially continuously in a direction along the substrate, and where the edge of the mask intersecting the further plane is within the area defined by H_1 , H_2 , C_2 and C_1 of Figure 2 of the accompanying drawings, each mask being closer to its associated source than to the substrate, and each mask being moveable but not being moved in the course of the deposition process.

3. A process according to Claim 2, in which the edge of the mask intersecting the further plane is within the area defined by H , C_2 and C_1 .

CLAIMS:

1. A ~~vapour deposition~~ combinatorial chemistry process, in which a material is vaporised from a ~~source~~ each of at least two sources and deposited on a single substrate, the path of the vaporised material from ~~the~~ each source to the substrate being partially interrupted by an associated mask, the positioning of the mask in a plane parallel to the plane defined by the substrate being such that the material is deposited on the substrate in a thickness which increases substantially continuously in a direction along the substrate, and where a further plane is defined by the centres of the source associated with that mask and the substrate and intersecting an edge of the mask, the mask being so positioned that its intersection with the further plane lies within the boundaries defined by the intersection of the surface of the source with the further plane and the lines in the further plane joining each edge of the source with the opposite edge of the ~~substrate~~. substrate, each mask being closer to its associated source than to the substrate. 2. A ~~vapour~~ and each mask being moveable but not being moved in the course of the deposition process.
2. A combinatorial chemistry process, in which a material is vaporised from a ~~source~~ each of at least two sources and deposited on a single substrate, the path of the vaporised material from the source to the substrate being partially interrupted by an associated mask, the positioning of the mask in a plane parallel to the plane defined by the substrate being such that the material is deposited on the substrate in a thickness which increases substantially continuously in a direction along the substrate, and where the edge of the mask intersecting the further plane is within the area defined by H_1 , H_2 , C_2 and C_1 of Figure 2 of the accompanying ~~drawings~~. drawings, each mask being closer to its associated source than to the substrate, and each mask being moveable but not being moved in the course of the deposition process.
3. A process according to Claim 2, in which the edge of the mask intersecting the further plane is within the area defined by H , C_2 and C_1 .

~~4. A process according to any one of Claims 1 to 3, where there are two or more sources depositing material simultaneously on a single substrate, each source being associated with a mask positioned as defined in Claim 1.~~